

## 840-VTJ Activator-Fixturing Structural Adhesive

### APPLICATIONS

- Bonding Ferrite Magnets in DC Motor Assemblies
- Joining Dissimilar Substrates
- Metal Frame Bonding
- Metal-to-Stone Assembly

### FEATURES & BENEFITS

- High-Performance Structural Adhesive
- Tensile Shear Strength 2,000 PSI in 60 Seconds
- Contains No Volatile Solvents or Ozone-Depleting Chemicals
- Exhibits Good Thermal Shock Characteristics

### RECOMMENDED SUBSTRATES

- Metals
- Ferrite
- Glass
- Ceramic
- Thermoset Plastics
- Filled Nylon

DYMAX Activator-Fixturing Structural Adhesive 840-VTJ is designed for rapid assembly/bonding of a variety of surfaces including metals, ferrite, glass, ceramics, thermoset plastics, filled nylon, and epoxy boards. DYMAX 840-VTJ is a high-performance, general structural adhesive that fixtures in 20 to 60 seconds. This material is especially suited for bonding ferrite magnets in DC motor assemblies. DYMAX 840-VTJ adhesive is used with activators to form excellent bonds between close-fitting parts. This product is in full compliance with RoHS directives 2015/863/EU.

UNCURED PROPERTIES *		
Property	Value	Test Method
Solvent Content	No Nonreactive Solvents	N/A
Chemical Class	Acrylated Urethane	N/A
Appearance	Translucent Straw	N/A
Soluble in	Organic Solvents	N/A
Density, g/ml	1.05	ASTM D1875
Viscosity, cP (20 rpm)	15,000 (nominal)	DSTM 502 <sup>‡</sup>

ADHESION	
Substrate	Recommendation
Metals	✓
Ferrite	✓
Glass	✓
Ceramic	✓
Thermoset Plastics	o
Filled Nylon	o

- ✓ Recommended Adhesive    o Limited Applications  
s Requires Surface Treatment (e.g. plasma, corona treatment, etc.)

CURED MECHANICAL PROPERTIES *		
Property	Value	Test Method
Tensile Shear Steel laps (psi) Aluminum laps (psi) Stainless Steel laps (psi)	1,700 1,700 2,000	ASTM D1002
Moisture Resistance (85°C, 100% RH) 72 h Steel laps (psi) Aluminum laps (psi) Stainless Steel laps (psi)	2,400 2,100 1,800	ASTM D1002
Two Thermal Shock Cycles (-20°/300°F) 1 h soak Steel laps (psi) Aluminum laps (psi) Stainless Steel laps (psi)	1,900 1,100 1,400	ASTM D1002

- \* Not Specifications  
N/A Not Applicable  
‡ DSTM Refers to DYMAX Standard Test Method



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REV. 12/20/2018

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**CURING GUIDELINES**

**HOW TO USE** (See “Guidelines for Activator Curing” for complete instructions for all activators)

1. Apply a thin film of activator over one of the surfaces to be bonded. Solvent-containing activators need a few seconds for the solvent to evaporate. Solvent-free activators may be used immediately.
2. Apply only a single drop or bead of adhesive to the center of the mating surface. **DO NOT SPREAD ADHESIVE OVER THE BOND SURFACE.**
3. Assemble parts and clamp or hold immobilized until fixture occurs (15-60 seconds). Do not stress bonds until sufficient strength has been achieved. (This may be up to several minutes depending on requirements.)
4. All adhesive should be contained within the joint.

**FACTORS AFFECTING CURING**

**Bondline Gap:** The larger the gap between bonding surfaces, the longer the fixture time. Gaps should not exceed 0.020 inch.

**Temperature During Cure:** Bonds in the process of curing, exposed to temperatures between 200°F and 300°F for 15 to 20 minutes, exhibit tensile shear strength 10 to 30% above rated levels for complete cure.

**Surface Cleanliness:** DYMAX adhesives tolerate dirt and oil on many surfaces. Clean surfaces, however, always result in stronger and more durable bonds. Waxes, greases, and various release agents can inhibit or prevent bond formation.

**Clamping:** Suggested to immobilize assembly parts until fixture or sufficient bond strength has developed. Parts moved or disturbed during fixture may be impaired.

**DISPENSING THE ADHESIVE**

This material may be dispensed with a variety of manual and automatic applicators or other equipment as required. Questions relating to dispensing and curing systems for specific applications should be referred to DYMAX Applications Engineering.

**CLEAN UP**

Uncured material may be removed from dispensing components and parts with organic solvents. Cured material will be impervious to many solvents and difficult to remove. Clean up of cured material may require mechanical methods of removal.

**STORAGE AND SHELF LIFE**

Store the material in a cool, dark place when not in use. Do not expose to light. This product may polymerize upon prolonged exposure to ambient and artificial light. Keep covered when not in use. This material has a 7-month shelf life from date of manufacture when stored between 10°C (50°F) and 35°C (90°F) in the original, unopened container.

**ACTIVATOR:** DYMAX activators are oxygen sensitive. The container should remain closed at all times other than when activator is being removed for use. For maximum effectiveness, activator should not be exposed to air for more than four hours. Recommend resealing activator with nitrogen gas when not in use.

**GENERAL INFORMATION**

This product is intended for industrial use only. Keep out of the reach of children. Avoid breathing vapors. Avoid contact with skin, eyes, and clothing. Wear impervious gloves. Repeated or continuous skin contact with uncured material may cause irritation. Remove material from skin with soap and water. Never use organic solvents to remove material from skin and eyes. For more information on the safe handling of this material, please refer to the Safety Data Sheet before use.

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